

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

STL3350

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Application Number

10/815,130

Filed

March 31, 2004

First Named Inventor

Norbert Parsonault

Art Unit

3682

Examiner

Justin M. Krause

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

applicant/inventor.

/S. Peter Konzel/

Signature

assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

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June 29, 2007

Date

attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____



*Total of _____ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	:	10/815,130	Conf. No.	:	9169
Applicant	:	PARSONEAULT, Norbert	Filed	:	Mar. 31, 2004
Examiner	:	KRAUSE, Justin M.	TC/A.U.	:	3682
Docket No.	:	STL/3350	Customer No.	:	70165
Title	:	FLUID DYNAMIC BEARING SPINDLE MOTOR			

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed along with a Notice of Appeal and review is requested for the reasons set forth in the following sheets.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account 14.1437. Please credit any excess fees to such account.

Status of the Claims: Claims 1-14, 21 and 22 are currently pending. Claims 1-14, 21 and 22 stand rejected. Claims 15-20 have been canceled. No claims have been withdrawn.

Respectfully submitted,
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REMARKS

I. Claim Rejections under 35 U.S.C. § 103

A. Claims 1, 2, 3, 6, 9-14, 21, and 22 stand rejected under 35 U.S.C. § 103 (a) as allegedly obvious over Usui (U.S. Patent No. 5,924,798) in view of Nii et al. (U.S. Patent No. 4,938,611). The Office Action alleges that it would have been obvious to modify Usui to include the fluid recirculation passage as described Nii et al. for purposes of recirculating fluid from one end of the bearing to the other and discharging heat from the fluid. Applicant respectfully traverses the rejection.

While “[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents[,]” the U.S. Supreme Court has made clear that an inquiry into whether there is “...a teaching, suggestion, or motivation to combine known elements [provides] a helpful insight.” *KSR Int'l v. Teleflex, Inc.*, 550 U.S. ____ (2007). Such an inquiry helps to uphold the well-settled principle that an invention “composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.*

In the instant case, Claim 1, from which all remaining claims depend, recites, “a recirculation channel disposed outside of the liner, the recirculation channel for recirculating lubricating fluid during relative rotation of the shaft and the liner.”

Usui describes a hydrodynamic bearing apparatus having grooves on a bearing surface of the bearing or the shaft (column 2, lines 16-21). Applicant submits that Usui does not disclose or suggest a recirculation channel disposed outside the liner and the Examiner has acknowledged that Usui “does not disclose a recirculation channel disposed outside the liner.”

Nii (U.S. Patent No. 4,938,611) describes a bearing apparatus for rotation at high speeds. The Examiner asserts that, “Nii teaches a bearing with a sleeve (6) and a recirculation channel (c) outside of the liner for the purposes of recirculating fluid from one end of the bearing to the other (see fig 3) and to discharge heat from the fluid to the bearing housing (col. 4, lines 26-28),” such that it would have been obvious to modify Usui to include the fluid passage of Nii. Contrary to the Examiner’ assertion, Nii fails to explicitly or implicitly disclose or describe “a bearing with a sleeve (6) and a recirculation channel (c) outside of the liner.” In fact, Figure 3

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and columns 3-4, lines 52-68 & 1-11 of Nii illustrates and describes a bearing including a shaft (1) surrounded by radial bearings 6 & 7. Nii explicitly recites that, “[p]assages a, b, c and d for the fluid lubricant are defined by the bearing housing 14, the first and second radial bearings 6, 7 and a rotating shaft.” (Col. 3, lines 61-63) (Emphasis added). Accordingly, Nii does not explicitly disclose or describe “sleeves” or a “liner,” as asserted by the Examiner, but rather, specifically describes radial bearings 6 and 7. Further, Nii does not implicitly disclose or describe sleeve or liners that are analogous to Applicant’s claimed liner. Applicant’s specification and figures describe and depict liner 234 as substantially lining borehole 252 and substantially encompassing that portion of shaft 202 within the borehole. (See, e.g., FIG. 2 and paragraph [0032]). Nii’s radial bearings 6 and 7, by contrast, do not substantially encompass the borehole or the shaft and are specifically illustrated as being disposed at upper and lower ends of the bearing housing. Accordingly, Nii’s radial bearings do not comprise “sleeves” or “liners” that are analogous to that structure described by the Applicant. As such, Nii does not disclose or describe a recirculation channel disposed outside the liner.” Consequently, Usui in view of Nii fails to disclose each and every element of Claim 1 as arranged to maintain a *prima facie* case of obviousness.

Additionally, Applicant submits that the Examiner has further attempted to render claim 1 obvious by attempting to demonstrate that each of the claim elements were independently known in the prior art and then applying hindsight reconstruction to use “that which the inventor taught against its teacher.” In this regard, Usui does not disclose or suggest a recirculation channel disposed outside a liner, nor discuss or describe the desirability of modifying a hydrodynamic bearing to recirculate fluid from one end of the bearing to the other and/or to discharge heat from the fluid. Similarly, Nii does not disclose or suggest hydrodynamic bearings, a liner, or the desirability of modifying hydrodynamic bearings to include a recirculation channel disposed outside the liner as claimed. Further, there is no reason to believe that the motivation to combine the references emanates from general knowledge as Nii is directed to solving problems related to plain bearings (column 1, lines 20-47) and Usui is directed to solving problems related to hydrodynamic bearings (column 1, lines 14-35). Plain bearings are wholly different from hydrodynamic bearings such that an artisan skilled in the art of plain bearings (i.e., Nii) would not look to the art of hydrodynamic bearings for answers to

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problems related thereto (i.e., Usui), and vice versa. Indeed, the skilled artisan would readily recognize that such arts were completely separate and distinct technologies and would not have been motivated to select the references for combination and/or combine the teachings of the references. Further, even where Usui discloses a liner and Nii discloses “passages” for circulating fluid, there is simply no teaching, suggestion or motivation, to combine the teachings of the references in the manner of the Applicant and to place the recirculation channel outside the liner as claimed. Consequently, the possible sources of motivation to combine the teaching of the references: 1) the nature of the problem to be solved; 2) the teachings of the prior art; and 3) the knowledge of persons of ordinary skill in the art, are not satisfied. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Accordingly, it more appears that the Examiner has used hindsight reconstruction and the Applicant’s disclosure “as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art,” since the “expressed motivation” to combine is lacking from the individual references and does not emanate from that knowledge generally available to the skilled artisan. *Grain Processing Corp. v. American Maize-Prod. Co.*, 840 F.2d 902 (Fed. Cir. 1988). Indeed, absent Applicant’s disclosure, there is simply no teaching, suggestion or motivation to select the references for combination and to modify them in the manner of the Applicant to arrive at the claimed invention.

In view of the above, the rejection should be withdrawn.

B. Claims 1-3 and 6-8 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Tanaka (U.S. 2001/0022869) in view of Nii (U.S. Patent No. 4,938,611). In the filed May 29, 2007, Applicant requested clarification with regard to the fact that the Examiner asserted Tanaka in view of Nii (U.S. Patent No. 4,938,611) as the basis for the rejection (page 6, lines 5-6 of the ‘Final Office Action’ Paper No. 20070328), but that the asserted motivation to combine applied Usui with Nii (pages 6-7, lines 18-19 & 1-2, respectively, of the ‘Final Office Action’ Paper No. 20070328). Again, Applicant has assumed that Tanaka was applied rather than Usui. Applicant requests clarification. The Office Action alleges that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the [Tanaka] in view of Nii, in reliance on the desired purposes of recirculating fluid from one end of the bearing to the other and discharging heat from the fluid. Applicant respectfully traverses the rejection.

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Tanaka (U.S. 2001/0022869) describes a fluid bearing device with wear resistance in starting and stopping (paragraph [0015]). However, Tanaka does not disclose or suggest “a recirculation channel disposed outside of the liner, the recirculation channel for recirculating lubricating fluid during relative rotation of the shaft and the liner,” as required by claim 1. Further, the Examiner acknowledges that Tanaka “does not disclose a recirculation channel disposed outside the liner.” Nii (U.S. Patent No. 4,938,611) is herein applied from above. As previously indicated, Nii does not teach or suggest a “liner” and/or a “recirculation channel disposed outside of the liner.” Consequently, Tanaka in view of Nii fails to disclose each and every element of Claim 1 as arranged to maintain a *prima facie* case of obviousness.

Further, the Examiner has attempted to render the instant claimed invention obvious “merely by demonstrating that each of its elements [were], independently, known in the prior art” and by combining the teachings of the references without an explicit or implicit reason that emanates from the prior art or that knowledge generally available to the skilled artisan. Tanaka does not teach or suggest the desirability if modifying fluid dynamic bearings in order to recirculate fluid from one end of the bearing to the other and/or to discharge heat from the fluid. Nii does not disclose or suggest the desirability of modifying fluid dynamic bearings as disclosed by Tanaka. Further, Nii is directed to solving problems related to plain bearings (column 1, lines 20-47) whereas Tanaka is directed to solving problems related to fluid dynamic bearings (page 2, paragraphs [0021] & [0022]). One of ordinary skill in the art of plain bearings (i.e. Nii) would not look to fluid dynamic bearings (i.e. Tanaka et al.), or vice versa, for answers to problems as each are completely separate and distinct bearing technologies. Applicant respectfully submits that the Examiner has failed to set forth a reasonable motivation to combine the references based on: 1) the nature of the problem to be solved; 2) the teachings of the prior art; and 3) the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Consequently, Applicant submits that the Examiner has combined the teachings of the references using “hindsight” reconstruction since the “expressed motivation” to combine is absent from the prior art references and does not emanate from that knowledge generally available to the skilled artisan.

In view of the above, the rejection should be withdrawn.

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C. Claims 4 and 5 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Tanaka (U.S. 2001/0022869) in view of Nii (U.S. Patent 4,938,611) as applied to claims 1-3, further in view of Titcomb (U.S. Patent 5,516,212). The Office Action alleges that it would have been obvious to incorporate a capillary seal between the liner and a tapered section of the shaft taught by Titcomb into the device of Tanaka, in the reliance on the motivation to seal the lubricating fluid between the bearing surfaces. Applicant respectfully traverses the rejection.

Tanaka and Nii have been discussed above. Tanaka “does not disclose a recirculation channel disposed outside the liner.” Nii does not disclose or suggest a “liner” and/or a “recirculation channel [to be] disposed outside of the liner.” Neither Tanaka and/or Nii disclose a capillary seal defined between a wall of the liner and a tapered section of the shaft.

Titcomb (U.S. Patent 5,516,212) fails to cure the deficiencies of Tanaka in view of Nii to include a “liner” and/or a “recirculation channel disposed outside of the liner” as recited in claim 1, from which claims 4 and 5 depend.

Tanaka does not disclose or suggest the desirability of modifying the “fluid dynamic bearings” in order to recirculate fluid from one end of the bearing to the other and/or to discharge heat from the fluid. Nii does not teach or suggest the desirability of modifying “fluid dynamic bearings” as disclosed by Tanaka. Additionally, Nii is directed to solving problems related to plain bearings (column 1, lines 20-47) whereas Tanaka & Titcomb are directed to solving problems related to fluid dynamic bearings (page 2, paragraphs [0021] & [0022]; column 4, lines 19-22, respectively). Accordingly, one of ordinary skill in the art of plain bearings (i.e. Nii et al.) would not look to art related to fluid dynamic bearings (i.e. Tanaka et al. or Titcomb), or vice versa, as each are completely separate and distinct bearing technologies. Therefore, remaining unsatisfied are the possible sources of motivation to combine the references: 1) the nature of the problem to be solved; 2) the teachings of the prior art; or 3) the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

Accordingly, for at least the above reasons, Tanaka in view of Nii and in further in view of Titcomb fails to disclose or suggest each and every element of claim 1, and those claims depending therefrom, as required to support a *prima facie* case of obviousness.

For at least the reasons set forth above, Applicant respectfully submits that the rejections should be withdrawn.